

ABSTRACT

A first electrode (46) has a main portion (46a) covering almost the overall area of a concavity (43) and including a notch (46c). A piezoelectric layer (47) has a main portion (47a) in a diameter
5 smaller than that of the concavity (43), and the whole thereof is within the concavity area, and almost overall the main portion (47a) excluding the part corresponding to the notch (46c) is laminated on the first electrode (46). An auxiliary electrode (48) extends from the outside of the concavity area into the
10 inside thereof and a part thereof is positioned within the notch (46c) of the first electrode (46) and supports a part of the piezoelectric layer (47). A second electrode (49) has a main portion (49a) laminated on the piezoelectric layer (47) and an extension part (49b) which extends from there and is connected
15 to the auxiliary electrode (48) within the concavity area. The residual vibration state of a vibration part of a liquid-detecting device can be detected easily and surely, and generation of cracks in the piezoelectric layer can be prevented.